

M
8089+
CMN

ME 27 NUMBER 4 PAGES 113-152 OCTOBER-DECEMBER 1993

TRAIL & LANDSCAPE



*A Publication Concerned With
Natural History and Conservation*

The Ottawa Field-Naturalists' Club

TRAIL & LANDSCAPE

Editor

Fenja Brodo

Production Staff

Sandra Gushue
David Thomson

Mailing Team

Michael Murphy
Co-ordinator
Jennifer Chaundy
Don Davidson
Gwen Jenkins
Roy Jenkins
David Smythe
Verna Smythe

Associate Editors

Bill Gummer
Peter Hall

Business Manager

Jim Montgomery

Views expressed in *Trail & Landscape* and in its news supplement
The Green Line are not necessarily those of The Ottawa Field-Naturalists' Club.

The Ottawa Field-Naturalists' Club

— Founded 1879 —

President

E. Franklin Pope

Objectives of the Club: To promote the appreciation, preservation and conservation of Canada's natural heritage; to encourage investigation and publish the results of research in all fields of natural history and to diffuse the information on these fields as widely as possible; to support and co-operate with organizations engaged in preserving, maintaining or restoring environments of high quality for living things.

Club Publications: THE CANADIAN FIELD-NATURALIST, a quarterly devoted to reporting research in all fields of natural history relevant to Canada, and TRAIL & LANDSCAPE, a quarterly providing articles on the natural history of the Ottawa Valley and on club activities.

Field Trips, Lectures and other natural history activities are arranged for local members; see "Coming Events" in this issue.

Membership Fees: Individual (yearly) \$23 Sustaining (yearly) \$50
Family (yearly) \$25 Life (one payment) \$500

Subscriptions to *Trail & Landscape*: (libraries and institutions): \$23
per year (volume)

Single copies of recent issues: \$6.00 each postpaid

Index to Volumes 1 - 20: \$8.00 + \$2.00 postage and handling

Membership application, correspondence :

THE OTTAWA FIELD-NATURALISTS' CLUB

Box 35069, Westgate P.O.

Ottawa, Ontario K1Z 1A2

Information:

(613) 722-3050

After 10 a.m.

TRAIL & LANDSCAPE

Published by
The Ottawa Field-Naturalists' Club
Box 35069, Westgate P.O., Ottawa, Ontario, K1Z 1A2

Volume 27 Number 4
October - December 1993

Table of Contents

Welcome, New Members	114
From the Editor	115
The 1993 Annual Conference and General Meeting of The Federation of Ontario Naturalists <i>Frank Pope</i>	116
Leitrim Albion Road Wetlands Part 3 <i>Albert W. Dugal</i>	118
Peelee '93, a Pun-ishing Review <i>Jack Romanow</i>	140
Ottawa-Hull Mid-Fall Bird Count	142
The Ottawa-Hull 1993 Christmas Bird Count	142
Offering a Helpful Hand ...er Rake <i>P.J. "Mickey" Narraway</i>	144
Ottawa Duck Club Inc. 17th Annual Wildlife Art & Carving Show & Sale	144
Index to Volume 27	145
Coming Events <i>Excursions & Lectures Committee</i>	147

Welcome, New Members

Ottawa Area

Shirley P. Bell
Peter W.P. & Shirley Browne
Gary & Ria Challen
Stephen B. Chapman
Catherine M. Delroy
Marie-Nelie Elien & Family
Susan R. Ellis & Family
Tanya Ewanovich
Pierre & Margo Gauthier
James & Jeanne Georgiles
Rosemary A. Gillott
Gabriella Goligel
Ellen & Kim Hayakawa
Kay R. Howlett
David J. T. Hussell & Erica Dunn
Ruth M. Hutchinson
Ruby Isaacs & Family
Korry R. Lavoie
Nancy D. & Eric J. Lerhe

Janick J.L. Lorion
Agnes I. MacIntosh
Karen E. McClure
Jack F. McCracken
Christine M. McGregor
Mary McWhinney
Phyllis S. Mutch & Family
Sophia B. O'Neill
Paule-Liliane Ouellet
P. N. Roberts & M. Oldham
Geoffrey L. Robins
Marilyn J. Tagoona
Shirley M. Taylor
John Townson & Family
Murray Wagner & Leona Wall
Alice M. West
Kathleen J. Whiting
Erin N. Yoshida

Other Areas

Martin Galloway & Family
Uxbridge, Ont.

Peter Ommundsen
Castlegar, B.C.

Monique R. Richard
Hammond, Ont.



P.J. Mickey Narraway
Membership Committee
August 1, 1993

From the Editor

Yes, it is good to be back. I enjoy editing *T & L* and I missed the excitement of those late night hours as several of us slaved over and around the computer to put an issue tidily "to bed." Thank you Bill Gummer for so willingly and expertly taking over the editing of this journal and for quietly handling an additional issue (not in the original agreement) while I got our house in order.

Neither Bill nor I could function were it not for Sandra Gushue and Dave Thomson. Sandra mastered the Ventura Publishing System that we now use and she creates the camera-ready pages with frequent help from Dave Thomson, our Ventura trouble-shooter and all-round computer expert. To all a big thank you, and may we continue to work successfully together.

In other quarters the news is grim. By now most of you already know that The Canadian Museum of Nature has summarily fired about a fifth of its professional staff. Whole sections have been closed down: mammals, birds, mussels, mosses & liverworts, the arctic research station at Polar Bear Pass on Bathurst Island. Gone are people who worked for over 20 years at the Museum and who took pride in their work and in establishing first rate research collections. One wonders how this development meets the Museum's stated objectives on biodiversity studies and arctic research? Was it really necessary to use such draconian measures, to lock these scientists out of their offices and laboratories and so treat them with distrust?

This mass firing is a great loss to our Club, the region and to Canada. Perhaps we took this resource of expertise too much for granted. Most of the scientists fired are members of our Club. Their names have been prominent in the "Coming Events" section of *T & L* in this issue and issues past. They gave generously of their time and knowledge, on behalf of the Museum, to lead field trips, hold workshops and give talks to us and to the public at large. Several were Macoun Club leaders. They will all be sorely missed.

And what will be the fate of the closed collections so carefully amassed over several generations of scientists? Will they be properly preserved? Will Club members and others be allowed to consult them as formerly, to seek information, to clarify a question, as the needs arise? What of the other collections that have not been formally closed? Now that the researchers who had developed these collections, have been divorced from their care, will these collections be allowed to grow, to reflect changes in knowledge to keep these collections current and useful? Will these be accessible to the keen amateur and professional alike? Some pointed questions should be asked.□

The 1993 Annual Conference and General Meeting of The Federation of Ontario Naturalists

Frank Pope, Chair, Organizing Committee

For some time now it has been the practice of the Federation of Ontario Naturalists (FON) to ask federated clubs to host their annual conference and general meeting. The Ottawa Field-Naturalists' Club is one of these clubs. We agreed to be the host for 1993. The last time our club acted as host was in 1983.

To give *T&L* readers an idea of what such a conference is like and to acknowledge the contributions of those who did the work of organizing it, I have written this article.

The conference began on Friday, June 18th and ended on Sunday, June 20th. It was held at Carleton University. A total of 241 people registered, down from 363 in St. Catharines last year.

The conference was a showcase for local talent. There were 24 field trips, beginning on Friday afternoon and ending on Sunday. Included were visits to museum collections, morning bird walks, and bus trips to natural areas ranging from White Lake Fen in the west to Alfred Bog in the east. Friday evening was the Annual General Meeting of the FON. Saturday began with a plenary session by **Dan Brunton** and ended with banquet speaker **Mike Runtz**. In between were nine, one hour sessions in parallel groups of three. The first set focused on resources, the second on challenges and the third on solutions and responses. There followed a photo salon; the winning photos to be published in "Seasons." Socially, there were two receptions and a banquet. A special guest was Howard Hampton, who had recently been appointed Minister of the Ontario Ministry of Natural Resources.

The work of the organizing committee and the volunteers was simply superb. Here is the cast.

Program, organized by **Dan Brunton**: speakers - Madeline Austen, Dan Brunton, Mike Cadman, Don Cuddy, Erich Haber, Don Lafontaine, Ted

Mosquin, Richard Pither, Phil Reilly, Don Smith, Marion Taylor, Jane Topping; session chairs - Dan Brunton, Nancy Doubleday and Mike Murphy.

Field Trips, organized by **Colin Gaskell**: trip leaders - Bill Arthurs, Tony Beck, Dan Brunton, Geof Burbidge, Mike Cadman, Martha Camfield, Brian Coad, Don Cuddy, Bruce Di Labio, Albert Dugal, Tanya Ewanovich, Trix Geary, Jack Gillett, Erich Haber, Peter Hall, Jim Harris, Jeff Harrison, Mary Hoth, Bernie Ladouceur, Ross Layberry, Ted Mosquin, Mike Rankin, Jack Romanow, Mike Runtz, Harry and Sheila Thomson, Adolph Vogg, David White. Volunteer assistants - Robina Bennett, Sandra Dashney, Don Davidson, Eileen Evans, Carol German, Rick Leavens, Diane Lepage, Kay Liver, Dave Moore, Catherine O'Keefe, Susan Phillips, Mapsy Stewart, Sally Stolberg and David Smythe.

Registration, organized by **Ken Strang**: registrar - Karen Richter; registration software package - Alan German; registration desk - Robina Bennett, Steve Blight, Sandra Dashney, Alan German, Carol German, Marg Henry, Dorothy Liddiard, Katherine Mason, Carol McLurg, Alyson Meldrum, Lee Nolan, Fran Norkett, Karen Richter, Betty Stern, Mapsy Stewart and Ken Strang.

Carleton facilities organized by **Rick Leavens**: exhibits - Eileen Evans with Gwennith Anderson, Anne Lambert, Barri Scully and Dennis Scully; photo salon - Pat Hunt with Tony Beck, Carol Kovacs and Karen Lehman, and prizes donated by Fuji Film (Grand Prize), BGM Photo Centre, Focus Centre, Ginn Photographic Company and TJ Photo Centre.

Publicity organized by **Dave Moore**: program booklet - Susan Laurie Bourque, Sandra Gushue, David Thomson; signs - Lee Cairnie; publicity - Betty Campbell.

Banquet organized by **Frank Pope** with Rick Leavens, Mike Runtz, Ken Strang, Sheila Thomson and Jane Topping.

Treasurer, **Gillian Marston**.

Should there be mistakes or omissions in this list of participants, I apologize.

Many thanks to you all for a job well done.☞

Leitrim Albion Road Wetlands

Part 3*

Albert W. Dugal
Canadian Museum of Nature

Introduction

My admiration and understanding of this complex, threatened, Class 1 Wetland increases with each successive year of study. Poring over old documents has engendered new insights into the post-settlement history of the area. The catalyst spurring on my research took the form of a disintegrating, 1917 surficial geology map depicting extensive organic deposits in the Leitrim area. These features, in conjunction with land elevations and soil types, suggest that the Leitrim Wetlands is but a fragment of a once enormous wetland complex, the main body of which sprawled east of Highway 31. The possibility that this could be a remnant of a much larger ecosystem was reinforced by the appalling statistic that Ottawa-Carleton has already lost over 60% of its original wetlands!

The presence of provincially significant birds such as Northern Harrier, Red-shouldered Hawk and Sedge Wren in the wetlands was previously established, but until I actually started compiling a list, I failed to appreciate the richness of the avifauna (Appendix 1). This wealth of species was confirmed by Richard Poulin of the Canadian Museum of Nature, who stated that in a given year, 150-160 species can be seen, migrants included. The adjacent uplands also harbour significant bird species, the most noteworthy being the **endangered Loggerhead Shrike!** Henslow's Sparrow, Eastern Bluebird, Clay-coloured Sparrow and Mockingbirds also breed in these open areas.

In this article I will examine the historical relationship between the Leitrim Wetlands and others nearby. I shall present Dr. Nuttle's critique of the controversial Cumming Cockburn Report, implementation of which is likely to destroy this valuable Class 1 Wetland. I will also describe some of the wetland areas, with special emphasis on the "flowage" and show the fallacy of the "core concept" as promoted by the developers. In 1991, the Ontario Ministry of

*See *T&L* Vol. 26, No. 3, 1992 for Part 2 and Vol. 24, No. 2, 1990 for Part 1.

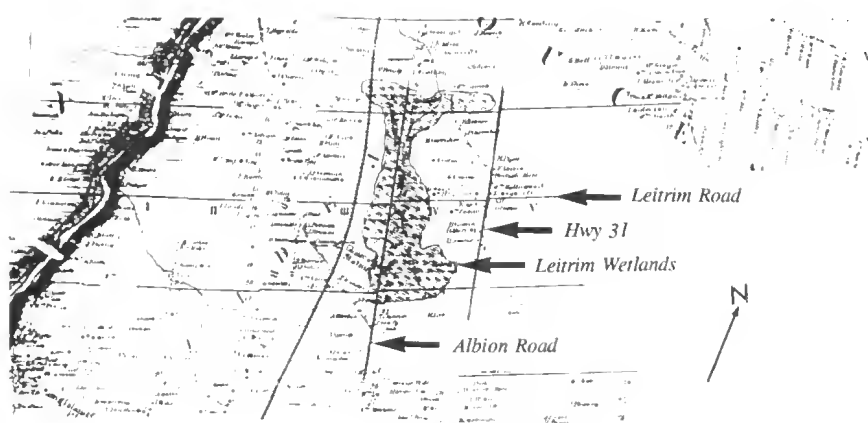
Natural Resources (OMNR) produced a southern wetland boundary and the relevance of this and both Federal and Ontario wetland policies to the Leitrim Wetlands will be reviewed.

A Great Wetland Complex?

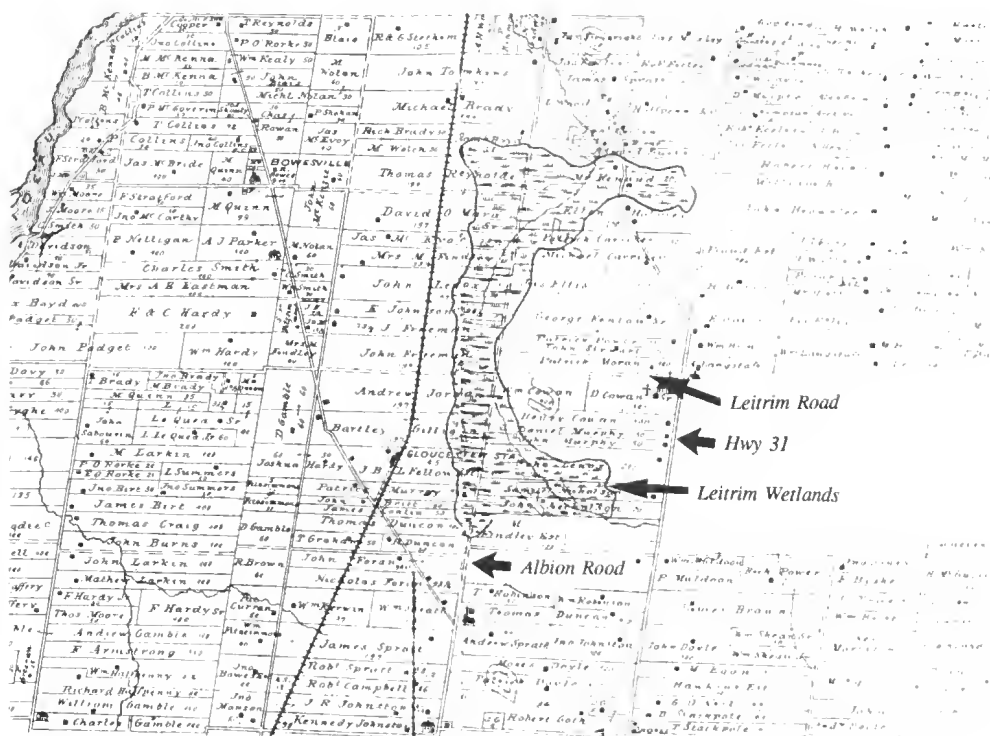
While rummaging through material on the Leitrim Wetlands, I came across part of a frayed, 1917 surficial geology map which was based on work completed by W.A. Johnston in 1915. His chart showed extensive organic deposits (muck and peat 30 cm [12"] or more in thickness) in the southern part of the City of Gloucester and northern part of Osgoode Township. As these deposits could originate only under extremely wet conditions (i.e. wetlands), I wondered if they could be components of a larger wetland complex, either directly connected or linked by streams. Subsequent study of the most recent surficial geology maps of our region indicates that Johnston missed several of these deep peat deposits. (These are included in Figure 1.)



Figure 1. 1915 Organic deposits, 30 cm (12") or more in thickness. (Primarily based on a 1917 surficial geology map (No. 1662) with additions from maps 1506A & 1507A 1982.)



1863 Wolling Map of Carleton County



1879 Belden Atlas of Carleton County

Figure 2. Historical maps showing the Leirim Wetlands to have been directly connected to wetlands on present-day NCC lands north of Leirim Road.

Earlier maps demonstrate a direct connection between the Leitrim Wetlands and neighbouring wetland areas owned by the National Capital Commission extending from Blossom Park to Leitrim Road (Figure 2). Were these also connected to the other wetlands east of Highway 31?

I carefully examined topographic maps dating back to 1906, and aerial photographs, especially the 1945 series (the first taken of this particular locale). Topographic maps depict changing drainage patterns due to ditching, elevation changes, and encroachments on various known wetland areas. Aerial photographs taken at the right time of year can often show old stream beds, poorly drained areas, and patterns in farm fields revealing the previous existence of wetlands.

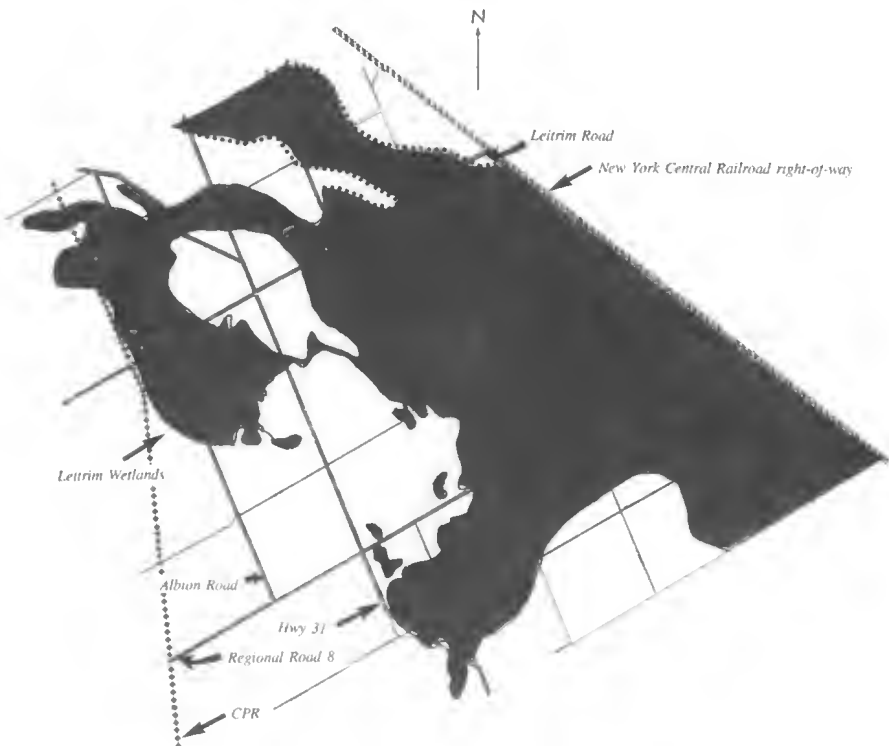


Figure 3. Approximate size of wetland complex west of N.Y.C.R. right-of-way circa 1830.

Due to time constraints, only lands west of the New York Central Railroad right-of-way were studied. The evidence strongly suggests that most of these wetland areas were connected, forming a massive wetland complex centered east of Highway 31, hooking up with the Osgoode Wetlands in the southeast and the Leitrim Wetlands to the west via an arc of wetland (Figure 3).

Poor drainage, a feature still prevalent today, appears to be the main factor responsible for this vast, predominantly-treed wetland. Removal of excess water from the land was a prerequisite for agriculture, for as the Belden Atlas states: "Much of the land which was at first perfectly worthless on account of its low level has been brought into cultivation by a comprehensive and non-expensive system of drainage." As most of this wetland complex was covered with rich organic soils or peat, land drainage activated decay bacteria and organic materials broke down, releasing CO_2 in the process.

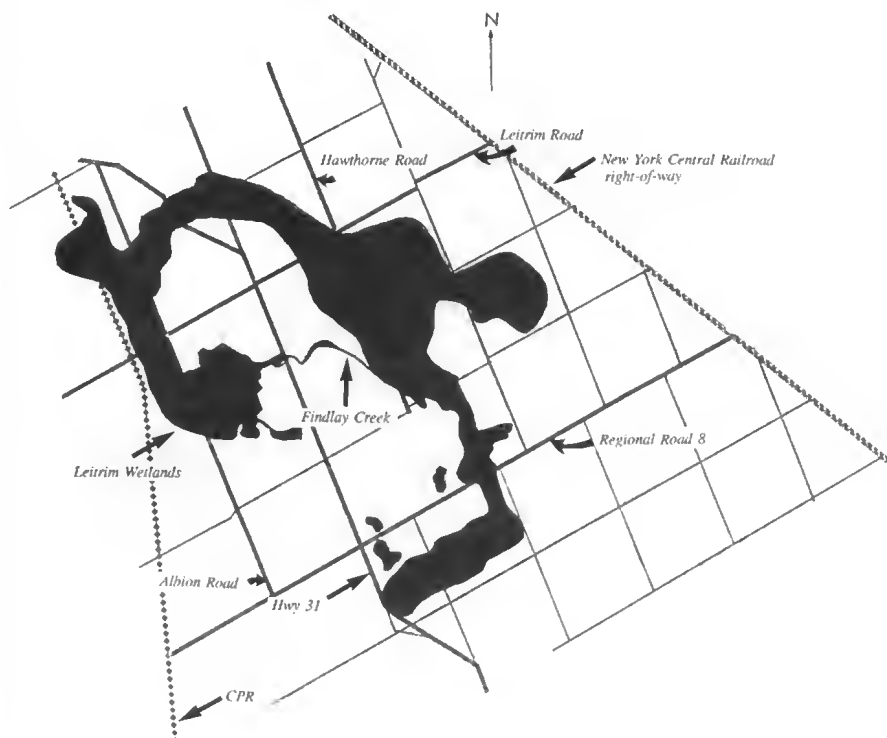


Figure 4. Proposed Class 1 Wetland Complex composed of fragments of pre-settlement wetlands complex.

The initial extent of peat covering is difficult to estimate because the first surficial geology map was produced at least 40 years after the original ditching schemes, sufficient time for considerable peat wastage. Agricultural practices fragmented the once extensive wetland, leaving an assemblage of predominantly swampy woodlands. To protect these fragments, I optimistically requested that the Carleton Place OMNR incorporate them into a Class 1 Wetland Complex and that a new wetland complex boundary be drawn (Figure 4). Their response was: "In terms of defining a complex, firm evidence of existing biological and/or hydrological interrelationships must be present. Relative to the wetland areas which you mention in your letter, it is exceedingly difficult to make a case that such relationships exists."

This in spite of the following:

- The Leitrim Wetlands receives water from NCC lands north of Leitrim Road;
- The Leitrim Wetlands is linked to wetland areas along Hawthorne Road via Findlay Creek; and
- The small peripheral wetland area due south of the Leitrim Wetlands supplies water most of the year via a channelized stream.

Aside from the Leitrim Wetlands fragment and those in the old South Gloucester Conservation Area, little is known of the flora and fauna of this unit. However, a biological inventory of the unstudied segments is bound to yield interesting finds.

Both the existing and former wetland ecosystems obtained water from precipitation, runoff from adjacent highlands and seepage from outwash deposits. Findlay and Sawmill Creeks originate in the wetlands, which also contribute water to the North Castor River, Bear Brook and in the past, to Ramsay Creek.

Dr. Nuttle's Critique of the Cumming Cockburn Report and related correspondence

I had hoped that Part 2 of my article on the Leitrim Wetland which questioned the conclusions reached in the Cumming Cockburn Report "Planning for Leitrim - An Integrated Approach" (an Environmental / Storm Drainage Report) would stimulate some positive action for preserving these valuable wetlands. Instead, the Ontario Ministry of Natural Resources (OMNR) responded to me as follows: "while the data you provided was valid, the Cumming Cockburn Study was comprehensive, and compiled in a manner that is consistent with the approach laid out in the T.C. Winter article." Refuting this contradictory statement required a highly qualified wetland hydrologist. Dr. William

Nuttall of the Rawson Academy of Aquatic Science, Ottawa, kindly offered to review the controversial Cumming Cockburn Report, and concluded that "an Environmental Assessment is justified and warranted" and he questioned OMNR's stance on this issue.

As Dr. Nuttall observes, the Cumming Cockburn Report "contains sufficient information to identify issues that must be resolved in order to preserve the wetland remaining after development goes ahead, but it offers neither a plan for preservation nor credible assurances that such a plan will be developed."

Dr. Nuttall goes on to say: "The report identifies water table levels in the wetland as the critical parameter that must be maintained in order to preserve wetland function in the remaining wetland in the face of destruction and development of the northern part of the wetland. The proposed development poses the risk that 'improved' drainage in the developed area will result in a drawdown of the water table and loss of peat in the remaining wetland. Assuring that development does not impede the inflow of groundwater to the wetland may not be sufficient to prevent changes in water table levels, because, as this report suggests, the impedance of drainage by impermeable soils and a pinching-out of a permeable water-bearing unit is responsible for the existence of the Leitrim Wetland".

Dr. Nuttall is also concerned that the report "does not identify how disturbance of water table levels will be avoided." He goes on to suggest that "there is a distinct pro-development bias in the environmental work that has been done so far on this project."

Regarding the attitude of the OMNR, Dr. Nuttall declares: "I am surprised and concerned to learn that the proposed development involves the destruction of 74 hectares of a wetland designated as Class 1, provincially significant wetland, by the Ontario Ministry of Natural Resources. Further, it appears that the destruction of the wetland, which is directly opposed to Ontario's wetland policy, has the concurrence of the Ministry of Natural Resources."

Of particular interest to me were Dr. Nuttall's views of a letter I received. Dr. Nuttall states: "Comments contained in a letter to you from the Ministry of the Environment suggest that the Ministry of Natural Resources does not fully understand the issues inherent in preventing impacts of development on wetland hydrology. It is stated that the 'Ministry of Natural Resources feels that ...the Cumming Cockburn study was comprehensive, and compiled in a manner that is consistent with the approach laid out in the T.C. Winter article.' This completely misstates the message of the Winter article and its relevance to the Leitrim Wetland. The Winter article does not lay out an approach for assessing

the impact of development on wetlands as this comment implies, rather Dr. Winter writes to identify some of the pitfalls and misconceptions that make such an assessment difficult."

Dr. Nuttle concludes that "an Environmental Assessment of the proposed development is justified and warranted."

The "Flowage"

The "flowage," a large, complex zone located along the eastern edge of the Leitrim Wetlands, was and continues to be an integral part of it. It extends north 1.1 km, dropping about 6 m (20 ft.) in elevation (see Figure 9). The flowage is characterized by an abundance of slowly-flowing water. Most of the year much of the Leitrim Wetland flowage is overlain with water ranging up to 30 cm (12") or more in depth. Contributors to this moisture are: precipitation, surface runoff from higher lands and seasonal waters from peripheral wetland as well as water carried by small streams or old ditches originating in adjacent wetland zones and seepage areas. Another possible aqueous source may be deep upwelling as indicated by rusty-coloured water seen south of the "island"



Figure 5. Marshy area in the flowage.

(a small area of higher elevation in the flowage). Water levels generally drop during summer's driest peak. In the prolonged drought of 1991, plants along the eastern edges of the flowage actually wilted.

An excursion into the flowage is an adventure linked to the past when much of the area was covered by elm swamp. In the late 50's and 60's, Dutch elm disease wiped out the elm trees, leaving a dead woodland. With shading largely eliminated, sun-loving marsh plants invaded, competing with the surviving flora. Abundant moisture and rich soils supported a dense, luxuriant vegetative growth. With the passage of time, dead elm skeletons toppled into the thick, green covering, becoming rapidly obscured. To penetrate the flowage's 1.5 to 1.8 m (5-6 ft.) high herbaceous vegetation demands great stamina (and fool-hardiness?). The feet must serve as sensory devices to grope a path through rotting debris and elevation changes.

The "flowage" incorporates a mosaic of plant communities including cattail marshes (Figure 5), swards of Canada bluejoint grass (*Calamagrostis canadensis*), large patches of 1.8 m (6 ft.) high spotted Joe-pye weed, willow swales, alder thickets, regenerating ash-elm stands, a silver maple grove, etc. Abundant fruit-bearing shrubs such as high-bush cranberry (*Viburnum trilobum*), wild black currant (*Ribes americanum*), and common elder (*Sambucus canadensis*) offer wildlife a bountiful food source. (One clump of elderberry was 2.4 m (8 ft.) high and 6 m (20 ft.) across—the largest I have ever encountered.)

The blend of plant communities in the "flowage" reflects the vegetation's richness. To date, 185 plant species have been recorded, 42 of which are regionally significant (see Appendix 3). These numbers equal or exceed those of some plant communities in the so-called "core" area.

Development Threat to the Flowage

If the various development proposals by Remer Holdings Ltd. and Tartan Homes Ltd. are permitted within the wetland boundaries (see Part 2, p. 68) the greater part of the flowage will be obliterated as well as the swampy woodlands and thickets bordering its eastern flank. This would fragment the wetland as the area south of the Remer property would be isolated. The biodiversity would decline because:

- certain bird species would disappear due to habitat loss;
- certain plant species found only in this part would be extirpated, e.g. black willow (*Salix nigra*); and
- certain plant communities located exclusively in the flowage would be obliterated, e.g. the silver maple grove.

Loss of the flowage lands would also impoverish the whole wetland ecosystem because:

- Large populations of regionally significant plants such as the purple-leaved willow-herb (*Epilobium coloratum*) would be destroyed, and overall, marsh vegetation dramatically decreased.
- Deer yard areas would be reduced. (I have seen deer wintering in the flowage and adjacent swampy woodlands to the east); and
- wildlife food supplies would diminish due to the elimination of many wild black currant, common elder and high-bush cranberry shrubs.

Any new drainage scheme in the flowage and adjacent areas is likely to have an adverse impact on the wetlands. Ditching in the past resulted in continuous peat loss due to the lowered water table. At least 0.9 m (3 ft.) of peat have already disappeared from the flowage area.

Maintaining the woodland communities bordering the flowage to the east would help protect the microclimate of the flowage, reduce noise pollution from proposed subdivisions and safeguard habitat now occupied by a variety of birds and other animals.

The "Island"

An upland area in the northern part of the flowage has been dubbed the "island." Likely lumbered about 80 years ago, it increased in size as



Figure 6. Hunting cabin on the "island" in the flowage.

surrounding land levels dropped due to peat wastage caused by drainage. The dominant trees here are: trembling aspen, white birch, white spruce and eastern white cedar. The largest trembling aspens are 24.3 to 27.4 m (80 to 90 ft.) tall. Balsam fir, balsam poplar and black cherry occur less frequently. After poison ivy, the most abundant shrub in the understorey is black buckthorn (*Rhamnus frangula*). A sprawling patch of viciously-thorned common blackberry (*Rubus allegheniensis*) hinders exploration in the center. Additional shrubs such as gooseberry, hazelnut, purple-flowering raspberry and honeysuckle, are scattered throughout the "island." The herbaceous layer is not particularly diverse, but does contain species listed as sparse in Gillett & White checklist e.g. the kidney-leaved violet (*Viola renifolia*) and the nodding trillium (*Trillium cernuum*). These nodding trilliums were among the most robust I have ever seen, easily 40 cm (16") tall.

One unexpected find on the "island" was an abandoned hunting cabin (Figure 6), one of two located in the wetlands, indicative of an abundance of game.

Terrain and Vegetation West of Albion Road

The section of the Leitrim Wetlands west of Albion Road (see Figure 3) is owned primarily by Transport Canada and forms part of the airport lands. During the summer and fall of 1992, I explored parts of this terrain and was impressed by the diversity and beauty of the plant communities. In certain places access was easy, but in others, where extensive seepage areas or incredible tangles of fallen trees dominated, maneuvering was an effort. Stumps (evidence of lumbering) sporadically dotted much of the uncultivated lands. Here, trees rarely exceed the 100 year mark.

Previously farmed lands in the northwest corners were covered by poplar woodland, dominated by trembling aspen with lesser amounts of balsam poplar, red maple and red ash.

Eastern white cedar, red maple, white birch and trembling aspen are plentiful in the unfarmed sector, occurring in almost pure stands or in various combinations. Less frequently occurring species are yellow birch, balsam poplar, red ash, black ash, balsam fir, white spruce and white pine. This hodgepodge of woodland communities probably relates to varying moisture regimes and past lumbering practices.

Black alder (*Ramnus frangula*) dominates the shrub layer in most of the western section. This gray-barked, European menace chokes several sites with dense thickets. Among the more profuse native shrubs observed were mountain maple (*Acer spicatum*) and Canada yew (*Taxus canadensis*).



Evergreen wood fern
(*Dryopteris intermedia*)

Boott's wood fern
(*Dryopteris X boottii*)

Crested wood fern
(*Dryopteris cristata*)

Figure 7. Boott's wood fern is a sterile hybrid resulting from the cross of evergreen and crested wood ferns. This hybrid is fairly common in the Leitrim Wetlands.

The herbaceous layer is varied, with ferns blanketing large expanses of understorey. Several hybrids of the shield ferns (*Dryopteris* species), such as Boott's fern (*Dryopteris X boottii*) (Figure 7) add to this lacy verdure.

To date, 39 species of regionally significant plants have been observed, and more will undoubtedly be found as this western sector is explored in more detail.

In recent years, Transport Canada constructed a radar dome in the wetland (Figure 8). This entailed construction of a roadway, a large gravel pad and



Figure 8. Radar dome constructed within the wetland boundaries on Transport Canada lands.

ditch digging for drainage. The beaver have been in the trenches here and their dams have elevated the water levels. Numerous green frogs (tadpoles and adults) as well as fishes inhabit the dammed ditch south of the radar dome. In this watery environment, dense growths of leafy pondweed (*Potamogeton foliosus*) provide food and shelter for aquatic animals. Lesser duckweed (*Lemna minor*) peppers the surface of ditch water.

The effects of peat wastage due to drainage was manifest throughout most of the western section. The ground level has dropped about 0.6 m (2 ft.) and in one area, along an old drainage ditch, cedar tree roots have been exposed by rapidly decaying peat. Strong winds have toppled many of the cedars due to their weakened anchorage. Blocking up the series of east-west ditches and modifying the ditches along Albion Road would halt the peat loss.

Hopefully the new Federal Policy on Wetland conservation will prohibit future developmental incursions into this federally-owned section of the wetlands.

The "Core" Concept

The word "core" is used by the developers' various environmental consultants to denote both centricity and a higher degree of importance for the plant communities contained therein.

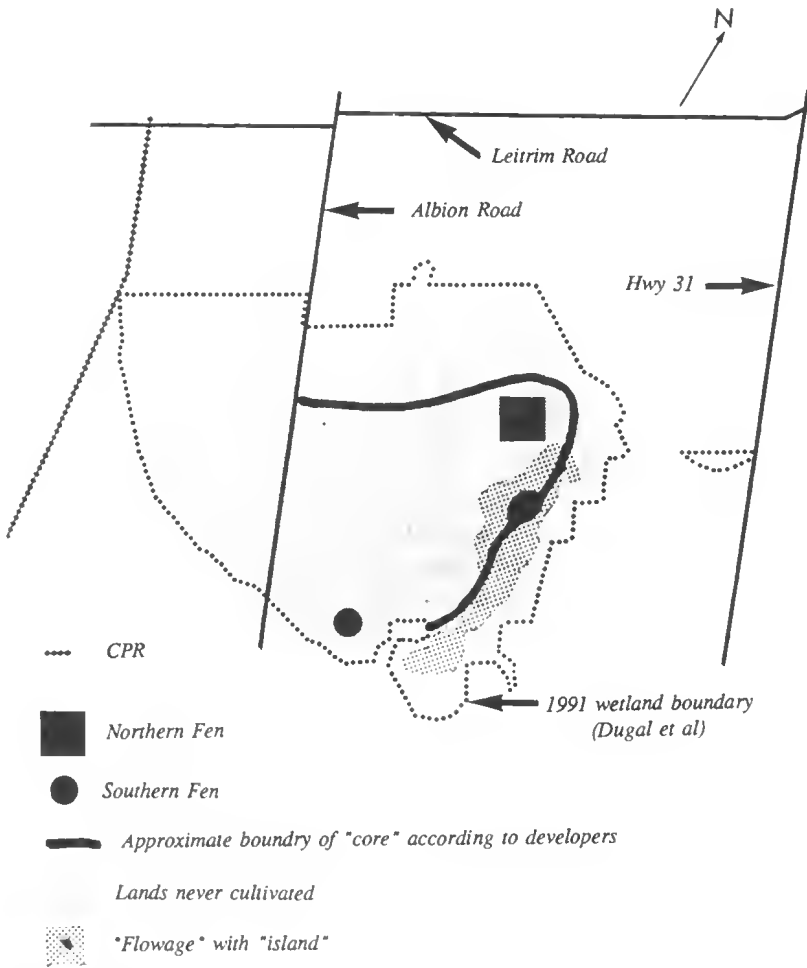


Figure 9. Peripheral location of the fens and the "flowage," the most significant plant communities of the Leitrim Wetlands.

This term is misrepresentative in several ways:

- Historically, the Leitrim Wetlands are only a part of a massive wetland complex centered east of Highway 31 (see Figure 4);
- The most significant plant communities in the Leitrim Wetlands fragment (i.e. the fens) are located near the wetland edges (Figure 9).
- Some of the more centrally located plant communities have less diversity and fewer regionally significant species than those situated near the fringes of the wetland.

- The use of peat depth as a definer of "core" area is faulty because of rapid peat loss due to drainage. (In places, at least 0.9 m (3 ft.) of peat have disappeared). At the present rate of peat loss, the core would have to be redefined every 30 years or so, and, in each case it would be smaller.

I view the "core" concept as a device to legitimize the destruction of parts of a Class 1 Wetland. In reality, the Leitrim Wetlands can be divided into two main components. First and most important, are lands that have never been cultivated (see Figure 9). In those "refugial" areas native wetland plants survived, while all around, the original vegetation was exterminated by axe and plow. The second component includes formerly cropped, damp fields, now reinvaded by plants, primarily from "refugial" areas. Urbanization in these areas will require "improved" drainage which would jeopardize wetland functions.

1991 OMNR Southern Wetland Boundary

The OMNR new wetland boundary for the southern section of the wetland, east of Albion Road, omitted some swampy woodland south of the Blais Road right-of-way on the eastern side of the flowage. This should not be a problem if the 120 m of adjacent land is used to protect these and former wetland areas as will be required for the rehabilitation and long-term restoration of the wetland.

The Federal Policy on Wetland Conservation

In 1991, the Federal Government unveiled its Wetland Conservation Policy, the objective of which is to "promote the conservation of Canada's wetlands to sustain their ecological and socio-economic functions, now and in the future."

Among the goals the Federal Government "will strive to achieve" are several that are pertinent to the Leitrim Wetlands. These include:

- "maintenance of the functions and values derived from wetlands throughout Canada.
- no net loss of wetland functions on all federal lands and waters
- enhancement and rehabilitation of wetlands in areas where the continuing loss or degradation of wetlands or their functions have reached critical levels
- recognition of wetland functions in resource planning, management and economic decision-making with regard to all federal programs, policies and activities
- securement of wetlands of significance to Canadians."

One strategy listed in the Federal Policy on Wetland Conservation is directed towards "managing wetlands on federal lands and waters and in other federal programs." Transport Canada owns one-fifth of the Leitrim Wetlands, thus this strategy is relevant. It "encourages actions to enhance wetland functions on federal lands...especially in those areas of Canada where...degradation of wetlands has reached critical levels..." This strategy also commits "all federal departments to the goal of no net loss of wetland functions." The Leitrim Wetlands will challenge the federal commitment, as a subdivision requiring "improved drainage" is proposed within 30 m (100 ft.) of Transport Canada's section, thereby threatening additional wetland degradation.

Environment Canada, in response to a request from the NCC, reviewed material on the Leitrim Village proposal. The Canadian Wildlife Service (CWS), a branch of Environment Canada, reported that the Cumming Cockburn Environmental Analysis has many inadequacies and considers "the resultant loss of wetland area and function to be a MAJOR PERMANENT NEGATIVE IMPACT." They recommended that "the entire wetland be protected and that an adjacent zone of 120 m be secured around the wetland." In summary, "The CWS considers the net environmental effects of the proposed development on Leitrim Wetland are unacceptable."

Ontario's Wetlands Policy Statement

The long-awaited provincial Wetlands Policy Statement became effective June 27, 1992. According to the Manual of Implementation Guidelines for the Policy (November, 1992), the goals "are to:

- ensure that the Wetlands are identified and adequately protected through the land use planning process; and
- achieve no loss of Provincially Significant Wetlands. Policy 1.2 states: "It is the Policy of the Province of Ontario that: Where Provincially Significant Wetlands have been identified, all planning jurisdictions, including municipalities and planning boards, shall incorporate policies and protect Provincially Significant Wetlands in official plans, zoning by-laws and other development decisions under the Planning Act."

The Leitrim Wetlands is situated in the Great Lakes-St. Lawrence Region, where the greatest loss of wetlands in Ontario has occurred. For this reason, Policy 2.1 prohibits development within provincially significant wetlands. The only exception appears to be where all approvals required under the Planning Act have been obtained prior to June 27, 1992.

However, the Carleton Place office of the OMNR does not intend to follow Ontario's Wetland Policy Statement, saying: "In the case of Leitrim, the

principle of development was established through the planning process prior to the wetland being identified and evaluated." This contradicts the Implementation Guidelines which clearly state: "More specifically, where the planning approval authority has not made a **draft approval** decision, that authority shall have regard to the Wetlands Policy Statement including the provision for an Environmental Impact Statement, regardless of how long the application has been under consideration. This is also the case even if the proposal has been given support by another decision-making level (e.g. municipal council)."

The Carleton Place office of the OMNR is apparently trying to remove itself from any future involvement with the proposed development within the Leitrim Wetland, saying: "To date, a master drainage plan and concept plan have been approved for Leitrim OPA #10 area. As these documents were prepared for the purposes of guiding future development and the Ministry of Natural Resources was part of the approval process, we will not be in a position to object to subsequent subdivision plan applications within OPA # 10 area..."

The OMNR also plans to use the Cumming Cockburn Report, which has been deemed inadequate by CWS and others, as an Environmental Impact Study!

Although Gloucester accepted the Master Drainage Plan Report (Cumming Cockburn Report) on April 28, 1992, they intend to implement more studies. According to Larry Morrison, Development Coordinator of the City of Gloucester:

"... more detailed studies pertaining to stormwater drainage and the wetland will be taking place in the near future.

In accordance with Section 10.2.2 of the Regions's Official Plan, the owners of Leitrim have completed a Master Stormwater Drainage Plan. To follow this study the RMOC requires a more detailed document referred to as a "Stormwater Design Plan." To Gloucester and the owners this means preparing a Stormwater Management Plan which will examine the details of the stormwater drainage and the impacts of it.

As indicated, more studies are pending. A Master Infrastructure Plan will be undertaken very shortly and it will examine how best to phase implementation of the infrastructure. More importantly though will be the initiation of the Stormwater Management Study. Prior to this latter study proceeding, Terms of Reference will be generated and circulated for acceptance by all concerned agencies. According to the regional O.P. these agencies should include the Ministry of the Environment, Ministry of Natural Resources, and the conservation Authority. Given the sensitivity of this development we also anticipate including federal agencies through the National Capital Commission. It is expected this study will also form part of the Environmental Assessment process and as such, interest groups and the general public may participate. Details surrounding what agencies, groups and/or individuals will be included have yet to be worked out, but I am certain your input will be welcome.

...the Stormwater Management Plan ...will delve into the details of:

- (a) how stormwater drainage will be managed;
- (b) how Findlay Creek will be altered by way of legislated mitigation and compensation means;
- (c) how the integrity of the class 1 wetland and its functions will be conserved."

Conclusion

The Leitrim Wetland is a unique, **irreplaceable** fragment of our natural heritage. Development within or adjacent to its boundaries should be prohibited unless there is widespread scientific acceptance that detrimental effects to this ecosystem can be avoided. At present, this is not the case. Its survival depends on an abundance of water, a commodity that even now is being drained away so rapidly that peat wastage is rampant. The overall water table must be raised to halt rapid oxidation of organic materials and stabilize the ecosystem. If developers are allowed to dismember the wetlands, there is every possibility that it will slowly bleed to death. Undoubtedly, Dr. Nuttle mirrors the concerns of environmentalists when he states: "This case interests me both because of the technical problem of avoiding wetland loss due to development on adjacent lands and as a case study of how Ontario intends to implement its wetland policy."

Acknowledgements: I am most grateful to Dr. William K. Nuttle, Associate of the Rawson Academy of Aquatic Science, for reviewing the Cumming Cockburn Report and governmental correspondence. I am indebted to Martha Camfield for her continued help in the field and map research. I would also like to express my appreciation to Gilles Seguin, Records Management Co-ordinator, City of Gloucester, and the volunteers of the Gloucester Historical Society for their aid. I am thankful, as well, to individuals who have provided or added to the initial faunal lists.

Voucher specimens of the vascular plants collected during this study have been deposited in the National Herbarium of Canada, Ottawa.

Literature Cited

- The Federal Policy on Wetland Conservation Environment Canada, 1991.*
- Gillett, J.M. and D.J. White, 1978. *Checklist of Vascular Plants of the Ottawa-Hull Region, Canada*. National Museum of Natural Sciences, Ottawa.
- Illustrated Historical Atlas of the County of Carleton*, 1879. H.Belden & Co. Toronto, Second reprint edition, 1976. *Cumming Atlas Reprints*, Stratford, Ontario.
- Johnston, W.A., 1917. *Ottawa, Carleton and Ottawa Counties, Surface Geology, Ontario and Quebec, Geological Survey of Canada Multicoloured Map No. 01662*.
- Manual of Implementation Guidelines for the Wetlands Policy Statement, November 1992*. Ontario Ministry of Natural Resources & Ontario Ministry of Municipal Affairs, Queens Printer for Ontario, 1992.
- National Air Photo Library
- a) Roll No. A9556 Frames 19-25
 - b) Roll No. A9557 Frames 14, 16, 18, 20, 22
 - c) Roll No. A9558 Frames 16, 18
 - d) Roll No. A9609 Frame 44
 - e) Roll No. A31326 Frame 135
- Richard, S.H., 1982. *Surficial Geology, Ottawa, Ontario and Quebec, Geological Survey of Canada, Map 1506A*.
- Richard, S.H., 1982. *Surficial Geology, Russell, Ontario Geological Survey of Canada, Map 1507A*
- Walling, H.F., 1863. *Map of Carleton County*, Gloucester, surveyed by O.W. Gray.

Faunal Appendices

The vegetative richness and complexity of the Leitrim Wetland suggests a great diversity of animal life. However, except for the birds, very little is known of the fauna. The lists provided are quite incomplete. The invertebrates, (the most numerous animals in this ecosystem) include snails, spiders, worms, millipedes, centipedes, mites, insects and a host of other creatures. Of all these, only the butterflies are listed. A detailed study of the fauna is required to:

- determine if any rare species inhabit those areas threatened by development, and
- to provide a base line (in the form of a total list of animals) to determine the long-term effects of adjacent development on the biodiversity of the wetlands. This poses a formidable task requiring many disciplines, and ideally, should be undertaken prior to any disruption of the natural habitat.

Appendix I - Checklist of Vertebrates of the Leitrim Wetlands

A. Birds *

Great Blue Heron	Downy Woodpecker	American Redstart
Green Heron	Hairy Woodpecker	Black-and-white Warbler
American Bittern	Pileated Woodpecker	Black-thr. Green Warbler
Black Duck	Alder Flycatcher	Canada Warbler
Mallard	Great Crested Flycatcher	Chestnut-sided Warbler
Wood Duck	Least Flycatcher	Common Yellowthroat
Broad-winged Hawk	Willow Flycatcher	Golden-winged Warbler
Cooper's Hawk	Eastern Kingbird	Mourning Warbler
Northern Goshawk	Eastern Wood Peewee	Nashville Warbler
Northern Harrier	Eastern Phoebe	Yellow Warbler
Red-shouldered Hawk	Common Crow	Yellow-rumped Warbler
Red-tailed Hawk	Blue Jay	Northern Waterthrush
Sharp-shinned Hawk	Barn Swallow	Red-winged Blackbird
Ruffed Grouse	Tree Swallow	Bobolink
Virginia Rail	Black-capped Chickadee	Brown-headed Cowbird
Common Snipe	Red-breasted Nuthatch	Common Grackle
Woodcock	White-breasted Nuthatch	Eastern Meadowlark
Black-billed Cuckoo	Brown Creeper	Scarlet Tanager
Yellow-billed Cuckoo	House Wren	American Goldfinch
Barred Owl	Sedge Wren	Indigo Bunting
Great Horned Owl	Winter Wren	Cardinal
Long-eared Owl	Catbird	Purple Finch
Saw-whet Owl	Brown Thrasher	Rose-breasted Grosbeak
Screech Owl	American Robin	Chipping Sparrow
Short-eared Owl	Wood Thrush	Clay-coloured Sparrow
Great Gray Owl**	Veery	Field Sparrow
Hawk Owl**	Cedar Waxwing	Savannah Sparrow
Boreal Owl**	Red-eyed Vireo	Song Sparrow
Belted Kingfisher	Warbling Vireo	Swamp Sparrow
Common Flicker	Ovenbird	White-throated Sparrow

*A compilation of sightings of resident birds by Todd Norris, Dan Campbell, Richard Poulin and other naturalists. Richard Poulin of the Canadian Museum of Nature, had a bird monitoring station next to the wetlands for 15 years. He was kind enough to review my list and make many additions. (He suggested that with migrants included, one could see between 150-160 species in the wetland in a given year.)

**winter residents.

B. Fishes *

<i>Umbria limi</i>	Eastern mudminnow
<i>Culaea inconstans</i>	Brook stickleback
<i>Semotilus atromaculatus</i>	Creek chub
<i>Pimephales notatus</i>	Bluntnose minnow

* Collected in November by Noel Alfonso, Canadian Museum of Nature. A spring through fall collection schedule would have yielded a greater diversity of species.

C. Amphibians D. Reptiles

Green frog	Garter snake
Leopard frog	Snapping turtle
Wood frog	
Spring peeper	
American toad	

E. Mammals

Beaver	Red fox	Mink	Raccoon
Coyote	Snowshoe hare	Muskrat	Skunk
White-tailed deer	Meadow vole	Porcupine	Short-tailed weasel

Appendix II - Partial List of Butterflies and Moths*

Hesperiidae

Carterocephalus palaemon
Erynnis icelus
Euphyes vestris
Poanes hobomok
Polites mystic
Polites themistocles
Thymelicus lineola

Lycaenidae

Callophrys henrici
Celastrina ladon
Glaucopteryx lygdarnus
Satyrus acadica
Satyrus calanus

Nymphalidae

Boloria bellona
Chlosyne harrisii
Limenitis archippus
Limenitis arthemis
Nymphalis milberti
Phyciodes tharos
Polygonia comma
Polygonia progne
Speyeria cybele
Vanessa atalanta

Pieridae

Colias philodice
Pieris napi
Pieris rapae

Satyridae

Cercyonis pegala
Coenonympha inornata
Euptychia cyme
Lethe anthedon
Lethe eurydice

True skippers

Arctic skipper
 Dreamy duskywing
 Dun skipper
 Hobomok skipper
 Long dash
 Tawny-edged skipper
 European skipper

Gossamer wings

Henry's elfin
 Spring azure
 Silvery blue
 Acadian Hairstreak
 Banded Hairstreak

Brush-footed Butterflies

Meadow fritillary
 Harris' Checkerspot
 Viceroy
 White admiral
 Milbert's Tortoiseshell
 Pearl Crescent
 Comma
 Gray comma
 Great Spangled fritillary
 Red admiral

Whites and Sulphurs

Common sulphur
 Veined white
 Cabbage white

Satyrs

Wood nymph
 Ringlet
 Little wood satyr
 Northern pearly eye
 Eyed brown

*Based on Ross Layberry's collections from the fringes of the wetland over a 10 year period. The most significant records are of *Callophrys henrici* (uncommon, extremely local) and *Chlosyne harrisii* (common, extremely local).

Appendix III - Regionally Significant Vascular Plants in the Flowage

(based on Gillett and White's Checklist of Vascular plants of the Ottawa-Hull Region, Canada)

Rare

<i>Scirpus pedicellatus</i>	Pedicellate wool-grass
<i>Geum laciniatum</i>	Slashed avens
<i>Epilobium coloratum</i>	Purple-leaved willow-herb
<i>Galium labradoricum</i>	Bog bedstraw

Sparse

<i>Sparganium chlorocarpum</i>	Green bur-reed
<i>Cinna latifolia</i>	Drooping woodreed
<i>Sphenopholis intermedia</i>	Slender wedge grass
<i>Carex sychnocephala</i>	Compact sedge
<i>Trillium cernuum</i>	Nodding trillium
<i>Ribes triste</i>	Wild currant
<i>Epilobium leptophyllum</i>	Narrow-leaved willow-herb
<i>Myriophyllum verticillatum</i>	Whorled water-milfoil
<i>Galium trifidum</i>	Small bedstraw
<i>Lonicera oblongifolia</i>	Swamp fly-honeysuckle
<i>Aster umbellatus</i>	Umbellate aster
<i>Bidens bipartita</i>	Beggarticks

Uncommon

<i>Potamogeton epihydrys</i>	Emerald pondweed
<i>Agrostis scabra</i>	Tickle grass
<i>Alopecurus aequalis</i>	Short-awn foxtail
<i>Bromus ciliatus</i>	Fringed brome grass
<i>Glyceria canadensis</i>	Canada manna grass
<i>Carex granularis</i>	Granular sedge
<i>Carex hystericina</i>	Porcupine sedge
<i>Carex stricta</i>	Stiff sedge
<i>Carex vulpinoidea</i>	Fox sedge
<i>Eleocharis erythropoda</i>	Red-stemmed spike-rush
<i>Muhlenbergia mexicana</i>	Mexican muhlenbergia
<i>Populus deltoides</i>	Cottonwood
<i>Salix amygdaloides</i>	Peach-leaf willow
<i>Salix eriocephala</i>	Heart-leaved willow
<i>Salix nigra</i>	Black willow
<i>Salix x rubens</i>	
<i>Salix serissima</i>	Autumn willow
<i>Rumex orbiculatus</i>	Great water dock
<i>Penthorum sedoides</i>	Ditch stonecrop
<i>Callitriche verna</i>	Common water starwort
<i>Cuscuta gronovii</i>	Dodder
<i>Chelone glabra</i>	Turtlehead
<i>Veronica scutellata</i>	Marsh speedwell
<i>Viburnum trilobum</i>	Highbush-cranberry
<i>Lactuca biennis</i>	Blue lettuce
<i>Sambucus canadensis</i>	Common elder

Pelee '93, a Pun-ishing Review

Jack Romanow

This trip was exceptional! To paraphrase our co-leader, Big Bob Bracken: "Where else could you go on a 4 day weekend in May and get something like this?!"

We started out with 44 birders and came back with 45; our bus driver, Rob, unable to resist the calling, got a good start on his "lifer list."

Under the im-peck-able co-leadership of two expert birders, namely Tony Beek (get the picture?) and Bob Bracken (where else could you go...?), the group was treated to a fun-filled weekend which included 145 different species of birds. At least 6 of the birders were rewarded with over 40 "lifers" and one birder even attained 50, surpassing my record for my first Pelee trip.

Colin Gaskell came through once again in award winning style. When he found that the motel had double-booked several of our rooms, he was accommodating and using his now legendary skills ensured that we were well fed and well rested, provided we were on time.

Among the 28 species of warblers seen at Pelee were Cerulean, Orange, Hooded, Kentucky and Mourning Warblers. The Prothonotary Warblers seen at nearby Rondeau Provincial Park were equally stunning!

At Hillman Marsh on Friday, everyone was treated to the sight of an adult plumage Bald Eagle circling over a pond within 200 feet of us. And then, to display its hunting "talons," it swooped low over the pond and deftly plucked a fish from the water, hardly getting its feathers wet. Later we drove by its nest, high up in a distant tree, where it has been nesting faithfully for several years. A Bald Eagle could be clearly seen perched high in the tree, by the dusk's early light.

On Sunday, we were delighted to see three Short-billed Dowitchers (they are the shorebirds with long bills). Each one was in different plumage: breeding, winter and transitional plumage. A rare opportunity indeed!

Many of us got to see the Common Nighthawk during the day as it roosted on a low bare branch, almost invisibly camouflaged by its plumage. It was Tony Beck's impromptu identification clinic for distinguishing Nighthawks from Whip-poor-wills that "jarred" us from further doubt about this great find.

For pure delight it's hard to beat seeing a Scarlet Tanager or an Indigo Bunting perched in the sun at the top of a nearby tree, each singing to its heart's content!

In addition to all the birds, Tony Beck got a tick which, fortunately, no one else got. With the northward spread of deer ticks bringing the threat of Lyme disease, tick checks took on a new meaning on this trip. At last report there were no ticklish encounters.

While we were focused on avian activity, there was a notable mammalian highlight when an Opossum delighted some of us by scurrying from the roadside across a wide open stretch of lawn. The Opossum didn't notice the birders on the bus because at 5:30 a.m. most were "playing dead" in the bus on the way to Point Pelee National Park.

It is true that we did not get to see Kirtland's Warbler, the Rock Wren nor the Connecticut Warbler, all of which were supposedly there, but then for Pelee, you know that there is always a next time. □



Common Nighthawk

Photo by Tony Beck

Ottawa-Hull Mid-Fall Bird Count

Four week count period between Saturday, October 16th and Sunday November 14th inclusive (five weekends).

Rules:

1. All participants must pre-register with the compiler, Daniel St. Hilaire: 776-3822; you will be sent a "Mid-Fall Count Checklist" package.
2. Participants fill a single calendar day on the checklist, noting total numbers of each species for each separate birding day during the count period.
3. Sightings must be within a 50 km radius of the Peace Tower.
(see next page)
4. All check lists must be returned to the compiler by November 22nd.

NOTE: Participant may report for as many days as he/she wishes within the reporting period, but each day requires a separate report.☐

The Ottawa-Hull 1993 Christmas Bird Count

This year's Christmas Bird Count will be held on Sunday, December 19th. Members interested in participating should contact the coordinator, Daniel St. Hilaire, of the Club's Birds Committee at 776-3822 (home phone), or at 19 rue Connaught, Hull, J8Y 4C8. He will provide information on action time, sectors where counts will be made and the sector leaders.

At 4:00 p.m., after the count, there will be a meeting of all interested people involved to review the events of the day and to compile an official summary of numbers and species of birds. This will be followed by a meal. Participants will be informed by the section leaders of the location for this get-together.

The figures from the final count will be presented as the official Ottawa-Hull report to the National Audubon Society. As previously, participants will be asked to pay a fee of \$5.☐



- | | | |
|-----------------------|-----------------------------|-----------------------------|
| 1 Ramsay Lake | 14 Britannia | 28 Jack Pine Feeder |
| 2 Lac Philippe | 15 Clyde Woods | 29 Experimental Farm, Outer |
| 3 Steel Line Road | 16 Kitchissippi | 30 Ottawa Intl. Airport |
| 4 Champlain Lookout | 17 Arboretum | 31 Russell Lagoon |
| 5 Moms Island | 17 Experimental Farm, Inner | 32 Embrun Lagoon |
| 6 Carp Ridge | 18 Lemieux Island | 33 Casselman Lagoon |
| 7 Dunrobin Ridge | 19 Rockcliffe | 34 Nepean Dump |
| 8 Pink Road Feeder | 20 Beechwood | 35 Richmond Lagoon |
| 9 Shirley's Bay | 21 Black Bay/Baie Noire | 36 Munster Lagoon |
| 10 Deschênes | 22 Mer Bleue | 37 Richmond Fen |
| 11 Bate Island | 23 Vincent Massey Park | 38 Marlborough Forest |
| 12 Parc Brébeuf | 24 Ramsayville Marsh | |
| 13 Andrew Haydon Park | 25 Ridge Road | D Dump |
| 13 Dick Bell Park | 26 Bear Brook | F Feeder |
| 13 Ottawa Beach | 27 Larose Forest | S Sewage Lagoon |

Offering a Helpful Hand ... er Rake



P.J. "Mickey" Narraway

Jim Wickware has quite a large, varied population of birds living in and visiting his nursery near Dunrobin.

For several years now the resident hummingbirds, attracted by the flowering shrubs, have come in through the open ends of the "hoop houses" to feed. (These are like Quonset huts, made of opaque plastic, open at both ends, and are 12 ft. wide, 10 ft. high and 40 ft. long.) The birds, in confusion, often fly high up to the smooth, plastic ceiling and cannot find their way out again. This worried Jim and his sons who didn't much like shooing the tiny visitors out because they were probably terrified and exhausted. One lucky day, as Jim was holding his "shooing" rake over his head, while waiting for a bird to calm down a bit, he realized the wee creature had landed on the rake. He then was able to walk gently to the end of the house, with his rake aloft, and he tipped the bird out at the entrance. Needless to say, the "shooing" rake is never far from the "hoop house," and transporting the visitors is simple, and far less traumatic, to both man and bird! Jim passed this on as a suggestion to cottagers who might find a trapped bird needing help.☐

Ottawa Duck Club Inc. 17th Annual Wildlife Art & Carving Show & Sale

OFNC Members should be aware that the Ottawa Duck Club will be holding its 17th Annual Show & Sale, October 22-24th at the Nepean Sportsplex on Woodroffe Avenue. This event is to raise funds for wildlife conservation in the Ottawa area. As in the past, our Club plans to have an exhibit in this show.

This exhibition features wildlife carvers, antique and contemporary decoy collectors, wildlife artists and photographers, and taxidermists. Carving and painting demonstrations are encouraged. The hours are:

Friday October 22, 5 - 10 p.m.

Saturday October 23, 10 - 10 p.m.

Sunday October 24th, 10 - 4 p.m.

Call Ellaine Dickson (729-1554) for further information.☐

Index to Volume 27

Birds

American Birding Association, Inc.	71
American Coot Drowns Another - Sequel, One	104
Bird Feeder, Entertainment and Some Success with Deterring Squirrels at a	105
Bird Feeders 1992 Update, OFNC	6
Birding Along the St. Lawrence and at Robert Moses Power Dam September 30, 1992	64
[Chickadee] March Dance [poem]	18
Christmas Bird Count, The Ottawa-Hull 1993	142
Crow's Nest in Tunney's Pasture, A	15
Great Blue Heron [poem]	89
[Grouse] Treasure Hunt [poem]	38
[Hummingbird] Offering a Helpfull Hand ...er Rake	144
Kingfisher at Turtle Pond, Life Cycles: The	11
Mid-Fall Bird Count, Ottawa-Hull	142
Pelee '93, a Pun-ishing Review	140
[Peregrine Falcons & Rock Doves] Does the Right Hand Know What the Left Hand Is Doing?	69
Shrike, The [poem]	101
Summary of Notable Bird Sightings, December 1991 to November 1992	91
Winter Bird Count, March 1, 1992 First Annual	66
Winter Bird Sightings December 1992 - February 1993	102

Club History and Affairs

Annual Business Meeting, The 114th	47
Awards Committee, A Plca from the	10
Coming Events	39, 73, 108, 147
Editor, From the	115
Federation of Ontario Naturalists Annual Meeting and Conference	52
Federation of Ontario Naturalists, The 1993 Annual Conference and General Meeting of the / Frank Pope	116
FON Conference, Volunteers Needed for	53
"Golden Anniversary" Membership List 1943-1993	89
Louise De Kiriline Lawrence, Bequest from the Estate of	3

OFNC Committees for 1993	50
OFNC "Library"	107
OFNC Slide collection	3
Our Mailing label... Did You Ever Wonder?	90
So Glad You're Back, Fenja	IBC
Soirée, Honorary Membership and the 1992 OFNC Awards, The 1993	83
<i>Trail & Landscape</i> Circulation	65
Welcome, New Members	2, 46, 82, 114

Conservation

Alvars at Alymer, The Discovery of	55
Being Good Neighbours on the Rideau	19
Canadian Endangered Wildlife List	107
Fletcher Wildlife Garden Update	8, 54
Leitrim Albion Road Wetlands Part 3	118
Wildlife Expeditions to the Rainforest of Jamaica	72

Mammals

Entertainment and Some Success with Deterring Squirrels at a Bird Feeder	105
---	-----

Plants

Knotweeds in the Ottawa District	5
Liliaceae and Smilacaceae of the Ottawa District	22
Lilacs in the Bush [poem]	49

Poems

Great Blue Heron	89
June Days	57
Lilacs in the Bush	49
March Dance	18
Shrike, The	101
Treasure Hunt	38

Miscellaneous

Ontario Science Centre, The	37
Ottawa Duck Club Inc. 17th Annual Wildlife Art & Carving Show & Sale	144
Ottawa Regional Science Fair	88
Rules of Access to the Shirleys Bay Causeway	4, 51
Turtle Pond: Reminiscences of Summer Past	58

Coming Events

arranged by the Excursions & Lectures Committee
For further information,
call the Club number (722-3050) after 10 a.m.

Times stated for excursions are departure times. Please arrive earlier; leaders start promptly. If you need a ride, don't hesitate to ask the leader. Restricted trips will be open to non-members only after the indicated deadlines.

ALL OUTINGS: *Please bring a lunch on full-day trips and dress according to the weather forecast and the activity. Binoculars and/or spotting scopes are essential on all birding trips. Unless otherwise stated, transportation will be by car pool.*

REGISTERED BUS TRIPS: *Make your reservation for Club bus excursions by sending a cheque or money order (payable to The Ottawa Field-Naturalists' Club) to E.M. Dickson, 2037 Honeywell Avenue, Ottawa, Ontario K2A 0P7, at least ten days in advance. Include your name, address, telephone number and the name of the outing. Your cooperation is appreciated by the Committee so that we do not have to wait to the last moment to decide whether a trip should be cancelled due to low registration. We also wish to discourage the actual payment of bus fees on the day of the event.*

EVENTS AT THE CANADIAN MUSEUM OF NATURE: *The Club is grateful to the Museum for their cooperation and thanks the Museum for the use of these excellent facilities. Club members must be prepared to show their membership cards to gain access for Club functions after regular museum hours. There is a charge for parking in the museum lot.*

BIRD STATUS LINE: *Phone 761-1967. The service is run by Larry Neily. Club members (and non-members) may call to learn up-to-date news on birding potential in the Ottawa district. (See T&L Vol. 22, No. 3, page 123.)*

Sunday
3 October
9:00 a.m.
to
4:00 p.m.

AUTUMN COLOURS BUS EXCURSION

Leaders: Ellaine Dickson and Aileen Mason

Meet: Front entrance of the Supreme Court Building,
Wellington Street at Kent Street.

Cost: \$8:00 (see Registered Bus Trips for details)

Enjoy a scenic ride through the picturesque rolling hills of the Outaouais region on route to the Forest Educative Centre at Lac-la-Blanche. Ellaine and Aileen will help you key out the many different trees along the pleasant nature trails. Expect crisp air, a leisurely pace and the splendour of autumn leaves. Bring a lunch and dress warmly.



**Date and time
to be decided**

**VISIT TO THE INDIAN RIVER OBSERVATORY
AT ALMONTE**

Leaders: Philip Martin and members of the Royal Astronomical Society of Canada
Meet: Neatby Building, front entrance, Central Experimental Farm, one block west of the Irving Place—Maple Lane Drive stoplight on Carling Avenue.
Members of the Royal Astronomical Society of Canada have willingly offered to show Club members some celestial attractions that are readily seen on a clear autumn evening. Bring warm clothing and a hot beverage! Please register as soon as possible with the Club number (722-3050) after 10:00 a.m. A map with directions will be supplied at the meeting place. Philip will advise registrants when the specific date is established. Unfavourable weather close to the date may necessitate rescheduling.

**Tuesday
12 October
8:00 p.m.**

**OFNC MONTHLY MEETING
CRUISE TO ANTARCTICA**

Speaker: Stewart MacDonald

Meet: Auditorium, Canadian Museum of Nature, Metcalfe and McLeod Streets.

Stewart MacDonald has long been associated with scientific research and conservation in the Canadian High Arctic. His passion for studying the behaviour of various species of birds and mammals has led to a number of significant discoveries as well as the creation of several important sanctuaries for wildlife. In addition, Stewart has also visited and conducted research in Antarctica. He first travelled there some twenty years ago, as part of the U.S. Antarctic Research Program, to study the ice pack ecosystem of the Weddell Sea. This past winter he was a guest lecturer on four separate tourist exploration cruises to Antarctica aboard the M/S EXPLORER. A noted photographer, Stu will focus on the visual and natural splendour of the "other end of the earth." He is the Curator Emeritus of Ethology at the Canadian Museum of Nature and an Honourary Member of the OFNC.

- Sunday**
17 October
9:00 a.m.
- LICHEN IDENTIFICATION FIELD TRIP**
Leader: Irwin Brodo
Meet: Westgate Shopping Centre, southeast corner of the parking lot, Carling Avenue and Merivale Road.
Bring a lunch for this long half-day outing to the Richmond Forest. See the next outing for related information.
- Tuesday**
19 October
8:00 p.m.
- LICHEN IDENTIFICATION WORKSHOP**
Leader: Irwin Brodo
Meet: Activity Room 2, Basement, Canadian Museum of Nature, Metcalfe and McLeod Streets.
This workshop will concentrate on lichens and pigments and provide an overview of the enigmatic and symbiotic relationship between fungi and algae. Participation is limited to the first 25 people to register by telephoning the Club number (722-3050) after 10:00 a.m.
- Sunday**
24 October
8:00 a.m.
- FALL BIRDING ALONG THE OTTAWA RIVER**
Leader: Tony Beck
Meet: Britannia Drive-In Theatre, 3090 Carling Avenue.
This will be a half-day outing to various spots along the river to observe waterfowl and other migrating species.
- Sunday**
7 November
9:00 a.m.
- LATE FALL RAMBLE IN THE GATINEAU**
Leader: Philip Martin
Meet: Supreme Court Building, front entrance, Wellington Street.
A general interest walk to discover and key out various types of nuts, fruits, seeds, fungi and other forms of plant life. Perhaps some interesting bird or mammal sightings as well!
Bring a lunch and dress warmly.

Tuesday
9 November
8:00 p.m.

OFNC MONTHLY MEETING
A CARIBBEAN TREASURE IN TROUBLE;
THE DISAPPEARING JAMAICAN RAIN FOREST

Speaker: Peter Hall

Meet: Auditorium, Canadian Museum of Nature, Metcalfe and McLeod Streets.

Jamaica, best known for its beaches, also has a unique and endangered rainforest fauna and flora. Peter has been to this island country to study the butterflies, birds and other wildlife as part of an international effort to save some of the endemic life forms such as the Jamaican Giant Swallowtail. (See page 72 of the April-June 1993 issue of *T&L* .) Peter is preparing for another trip there with OFNC members and will give us an overview of this natural paradise that is under pressure.

Saturday
13 November
8:00 a.m.

LATE FALL MIGRANTS

Leader: Tony Beck

Meet: Britannia Drive-In Theatre, 3090 Carling Avenue.

The emphasis of this half-day outing will be on the observation of late fall raptors and any early winter arrivals.

Sunday
14 November
9:30 a.m.

GENERAL INTEREST WALK IN THE WEST END

Leaders: Ellaine Dickson and Robina Bennett

Meet: Lincoln Heights Galleria, northeast corner of the parking lot, Richmond Road and Assaly Road.

Bring a snack and dress warmly for this long half-day outing.

Sunday
5 December
8:00 a.m.

LATE FALL AND EARLY WINTER BIRDS

Leader: Jim Harris

Meet: Westgate Shopping Centre, southeast corner of the parking lot, Carling Avenue.

An interesting half-day outing to discover lingering fall migrants as well as some of the intriguing species that reside in the Ottawa District during the winter.

Friday
10 December
2:30 p.m.
to 4:30 p.m.

VISIT TO THE BUTTERFLY AND MOTH COLLECTION

Leader: Philip Martin 729-3218

Meet: Foyer of 960 Carling Avenue (The Neatby Building opposite the Civic Hospital) at 2:15 p.m.

You will see some of the fine specimens of butterflies and moths in the Department of Agricultural Insect Collection. Dr. Henri Goulet will also show how various insects are caught and some of the techniques used for their preservation and display. Interested persons should register at the club number (722-3050) after 10:00 a.m.; attendance will be limited to the first 15 persons.

Tuesday
14 December
8:00 p.m.

OFNC MONTHLY MEETING

AN EVENING OF NATURE PHOTOGRAPHY

Speaker: Tony Beck

Meet: Auditorium, Canadian Museum of Nature, Metcalfe and McLeod Streets.

Tony will present three short programs of nature photography — Woodland Marsh, North Atlantic and Sonoran Desert synchronized with selections of soothing music and recordings of the sounds of nature. A longer fourth feature (unaccompanied by music) will highlight many of the dramatic aspects of nature and scenery to be savoured at Presqu'île Provincial Park. Club members who have enjoyed viewing Tony's photography at the Annual Soirée and Members' Slide Night will definitely want to attend this presentation.

Tuesday
11 January
7:30 p.m.

OFNC 115th ANNUAL BUSINESS MEETING

Meet: Auditorium, Canadian Museum of Nature, Metcalfe and McLeod Streets.

We will begin with some time to review the Annual Report, then proceed to consider the report, elect the new council, ratify the constitution discussed last year and receive a presentation on our publishing activities.

Saturday
15 January
10:00 a.m.
to
12:00 noon

**VISIT TO THE BOTANY COLLECTION OF THE
CANADIAN MUSEUM OF NATURE**

Leaders: Mike Shchepanek and Albert Dugal

Meet: 1505 Laperriere Avenue.

This is a rare opportunity to tour the collection which contains approximately one million dried and pressed specimens, including vascular flowering plants, lichens, mosses and algae. The main emphasis will be on flowering plants but the tour will include the whole facility. If you are interested please register with the club number (722-3050 after 10:00 a.m.) before January 12, 1994.

Saturday
29 January
8:00 a.m.

WINTER BIRDING AT CORNWALL POWER DAM

Leader: Bruce Di Labio

Meet: Front entrance, Brooke Claxton Building (Health and Welfare Canada), de la Colombine Boulevard at Tunney's Pasture.

This full-day outing will be geared primarily toward the identification of overwintering gulls and waterfowl in the vicinity of the Moses-Saunders Power Dam. Expect the unexpected! Bring a lunch, warm drink and heavy winter clothing as well as proof of Canadian citizenship. (We may travel to the American side.) Transportation will be by private car.

**NEWFOUNDLAND BY COACH
FRIDAY JUNE 24 TO SATURDAY JULY 9 1994**

Explore Newfoundland's bounty on a 16 day tour. Experience whales at close range. Watch Bald Eagles swoop down to catch fish. Delight at the beauties of Gros Morne National Park. The more adventurous may elect to climb the provinces largest mountain in search of Rock Ptarmigan. We hope to see Black-headed Gulls breeding when we visit Stephenville. Bogs and forests will offer opportunities to find a variety of flora and fauna. The Avalon will afford ample sightings of Gannets, Puffins, Murres, Razorbills, moose and caribou. Pelagic birding on the ferry crossings should produce sightings of Shearwaters, Fulmars, and Storm Petrels.

This trip will accommodate approximately 25 persons. Register soon as acceptance will be on a "first-come, first-served" basis. The trip will proceed only if there is sufficient early interest. A detailed itinerary and costs will follow in the next addition of *T&L*. For more information contact Tony Beck or Carol Lynch at 820-9165; to register call the club phone number at 722-3050 (after 10:00 a.m.) □

Nominations for OFNC Awards

Nominations are requested from members for the 1993 awards. For descriptions of these awards see *T&L* Vol. 27, No. 1, 1993.

Nominations and supporting information must be received no later than December 10, 1993. Submit them to Enid Frankton, Chairman, Awards Committee, 2297 Fox Crescent, Ottawa K2B 7K5.☐

Nominations for OFNC Council

The Nominating Committee provides a slate of candidates for election of officers and other Council members, based on nominations submitted by Club members. Nominations require the signature of the nominator, and a statement of willingness to serve by the nominee. Relevant background information on nominees would be helpful. Nominations must reach Bill Gummer, Chairman of the Committee, 2230 Lawn Ave., Ottawa K2B 7B2, no later than November 15, 1993.☐

NOTICE:

A few minor changes have been made to the
MEMBERSHIP APPLICATION FORM,
therefore, members distributing this form are asked to call
722-3050 (after 10:00 a.m.), 596-1677 or 592-3011 as soon as possible.☐

Any Articles for *Trail & Landscape*?

We are always pleased to receive from Club members stories or reports on their activities in nature. You don't have to be a practiced author to submit items: actually you could gain some practice doing it. Any interesting field trips, unusual observations, new experiences in significant areas, or reports on concern about natural areas, would be of interest to all of the rest of us. Please try.

Submissions on IBM or IBM-compatible computer, on 5.25 or 3.50 inch diskettes would be welcome. But, we will gratefully receive submissions in any form — typed, hand-written, printed or painted!☐

DEADLINE: *Material intended for the January-March 1994 issue must be in the editor's hands by November 1, 1993. Mail your manuscripts to:*

Fenja Brodo, Editor, *Trail & Landscape*,
28 Benson Street, Nepean, Ontario, K2E 5J5
(613) 723-2054☐

ISSN 0041-0748

TRAIL & LANDSCAPE

published by

THE OTTAWA FIELD-NATURALISTS' CLUB

Second Class Mail - Registration Number 2777

Postage paid in cash at Ottawa

Change of Address Notices and Undeliverable Copies:

Box 35069, Westgate P.O.,

Ottawa, Ont. K1Z 1A2

Return postage guaranteed

Printed by
LOMOR PRINTERS LTD.



The GREEN LINE



OPINION

What's Going on at the Canadian Museum of Nature? *by Michael Ross Murphy*

Since 1879, the Ottawa Field-Naturalists' Club has enjoyed a mutually beneficial relationship with the Canadian Museum of Nature, known as the National Museum of Natural Sciences until July 1990.

Recently, the Canadian Museum of Nature (CMN) has been having problems. Rumours of more than 50 jobs to be lost reached the OFNC in February. Despite expressions of concern from the OFNC, museum professionals and many other natural history organizations, the CMN laid off 51 staff in mid-July. Thirty-nine "permanent" staff are on paid leave until the middle of January, twelve term employees have already been terminated, and two vacant management positions have been abolished. CMN staff has been reduced by 20% overall (1 person in 5). Research, technical support, and public programming staff have once again taken the brunt of the cuts.

The National Collections are in peril. Research has been discontinued in ornithology, mammalogy, reptiles and amphibians, bryophytes, isopods, ethology, palaeo-mycology and research will decrease in the field of vascular plants. Technical support has been eliminated for molluscs, mosses, osteology, crystallography, birds and mammals. Museum management is apparently finishing the job they began in 1985 when 17 Museum staff in the curatorial and collections area were laid off (see Trail & Landscape, Volume 18 # 5 for details).

The traditional focus on collection-based systematics and taxonomic research has been lost. CMN Director Dr. Alan Emery has publicly stated his opinion about the role of the Museum he has been managing since 1983: *"We want to catapult the Museum from kind of a traditional organization, that deals with old-fashioned kinds of museum type exhibits, old-fashioned types of research, and ways of holding the collection, into the future..."* (CBO Radio, June 21st, 1993). The Museum's collection system has been completely reorganized and has a new emphasis: a sort of "specimen warehouse" staffed by conservation technicians who manage space and specimens in the most up-to-date and cost-effective ways but have little or no knowledge of the contents of the collections they operate. The new "collection technicians" may not know what the specimen is or how it is relevant but will know standard retrieval procedures and billing rates.

The National Collections contain between six and eight million items, some dating back to the 1700's. Many OFNC volunteers have assisted curatorial staff over the difficult years since the 1985 cutbacks. I was one of these volunteers, and can personally attest to the potential value of the collections for systematics and taxonomic research as well as the demoralizing consequences of inadequate funding and management support.

It is well to consider that similar reorganization of research and collections at the Natural History Museum of London, and the Swedish Museum of Natural History have resulted in significant deterioration in these collections, which are now largely unavailable for study. Attempts now being made in the British institution to "salvage" their collections are extremely arduous since the expertise formerly associated with those collections was lost forever with the firing of research and curatorial staff.

By comparison, the Smithsonian Institution, under similar fiscal constraints, has made cuts in other areas but has wisely taken care to increase staff and budgets for basic scientific research. The American Museum of Natural History and the Missouri Botanical Gardens have also made decisions to increase staff and research budgets and to make cuts elsewhere.

An independent task force was commissioned by the Museum's Board of Trustees to recommend a strategy to fulfill the research mandate of the CMN. The task force delivered its report in January 1992 containing 33 recommendations, which included increasing the percentage of the budget spent on basic research and hiring ten more scientists! Unfortunately, these recommendations have been either entirely ignored or modified beyond recognition by CMN management, who have laid off 16 people in research and collections instead.

Such ill-advised changes at the CMN could not have been made at a worse time. Please recall that by signing the convention on biodiversity at the Earth Summit in Rio de Janeiro in 1992, Canada assumed responsibility for the development of national action strategies for the preservation of Canadian biodiversity as well the development and maintenance of a national biophysical inventory. The science of systematics is fundamental and the role of the National Collections is crucial to fulfilling this mandate.

(continued on page 2)

What's Going on... (continued from page 1)

If the expertise of the CMN is more important than ever before, just why is the management of the Museum "downsizing" instead of increasing their human resources? The short answer seems to be that Museum management is under pressure from both the Government of Canada and the Board of Trustees to balance the books. The Auditor General for Canada will not sign the 1992 Annual Report until the CMN provides a schedule to Treasury Board for repayment of cost overruns incurred since July 1990.

The annual budget of the CMN is approximately \$22 million, of which more than \$18 million comes from Parliament. Federal funding to the Museum has been progressively chopped over the past three years and is now \$3 million below 1990 funding levels. The proposed staff cuts are supposed to save \$2.5 million in salaries. By comparison, the annual research budget is approximately \$3 million.

It seems clear that Treasury Board and the Government of Canada have not been fully informed that this restructuring plan includes the sacrifice of National Collections and the skilled staff whose collective knowledge and experience would thereby be lost.

The two scientists on the Board of Trustees with the most relevant background and experience were also those most vocal in their criticism of Museum administration. Both have either declined to (or have not been invited to) renew their terms.

CMN management claim to believe that the changes they have made have actually improved the research

programs and collections management at the Museum by making them more modern, more relevant and more self-sustaining in increased revenue. They seem to think that the way to attract visitors to the museum is to offer the public "high-tech" interactive displays that educate and inform painlessly as they entertain. They have replaced the former research divisions with 6 "Centres of Knowledge" in the areas of *biodiversity*, *polar studies*, *inter-american studies*, *planetary origins*, *humans & nature*, and *science & society*.

Having seen recent examples of this "new generation" of programming at the CMN, I venture to predict that this approach will not only fail to increase public attendance, but will alienate the existing base of support.

The Sierra Club is coordinating a coalition of numerous environmental organizations, concerned scientists and museum professionals in a special project called the **True Friends of Nature** to press for an independent review of the Museum's mandate and the restructuring plan. If you, too, are alarmed at the new directions taken by the Museum, the loss of expertise and the potential loss of the National Collections, please write them, voicing your support for basic research in the natural sciences. Their address is:

True Friends of Nature c/o

1 Nicholas St., Suite 620, Ottawa, K1N 7B7

Their telephone number is (613) 233-1906. They will ensure that your views reach the Board of Trustees and the Government of Canada.

Events at the Canadian Museum of Nature Auditorium
Lecture by Dr. Iain Douglas-Hamilton, OBE
co-author of 'Save the Elephants' & 'Battle for the Elephants'

'Elephant history is at a watershed. For the last two decades, elephants have been decimated by the ivory trade. Will the current ivory ban guarantee their future? Can humans leave enough space for this large and demanding species? Iain Douglas-Hamilton argues that if we rise to the challenge of providing for the needs of elephants we are defending our own planet'.

Tuesday October 19th at 14:30

Special afternoon presentation for students; admission \$5.00

Tuesday October 19th at 19:30


Evening lecture; admission \$15.00

Advance ticket sales: 990-3509 or toll-free 1-800-2633-4433


Special Lecture Series

(free with Museum admission)

Sunday October 3rd at 2:00 pm

 **A Day at the Beach - 95 Million Years Ago**
with Dr. Steve Cumbaa

Sunday October 10th at 2:00 pm

 **Dinosaurs and Extraterrestrial Intelligence**
with Dr. Dale Russell

Sunday October 17th at 2:00 pm

 **Plants of the Dinosaur Era**
with Dr. David Jarzen

October is Dinosaur Month at the CMN!

GREEN LINE News Editor: Jim Reil (819) 455-9635

The Ottawa Field-Naturalists' Club

PO BOX 35069 RPO WESTGATE

OTTAWA ON K1Z 1A2